



**The Effect of European Union Funds on Firms: The Case of Northern
Portugal (2007-2013)**

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Abstract

The purpose of this dissertation is to understand whether the European Union (EU) funds contributed to the development of Portugal's north region firms. The research is supported with the appropriate data, which includes startup and bankrupt firms. Our sample cover 760 firms from Portugal, 380 that obtained the funds on 2007 and 2008 and the other 380 which are them competitors that had been chosen randomly and did not obtain such funds. The selection of the matched sample was made through the measure of the variations of their respective financial indicators from 2007 until 2016. Important to note that was used 2015 data on the unviability of not obtaining 2016 data on certain cases. Our main conclusion is that EU funds produced positive results. However, the results were lower when compared to the financial ratios of the remaining market in the north of Portugal. Considering the results obtained, we are led to conclude that the convergence process between regions is not being verified.

Abstracto

O objectivo desta dissertação é entender se os fundos da União Europeia (UE) contribuíram para o desenvolvimento das empresas da região Norte de Portugal. A pesquisa é suportada com os dados apropriados, que incluem startups e empresas falidas. A amostra cobre 760 empresas de Portugal, 380 que obtiveram os fundos em 2007 e 2008 e as outras 380 que são concorrentes que foram escolhidas aleatoriamente e não obtiveram esses fundos. A selecção da amostra correspondente foi feita através da medida das variações dos seus respectivos indicadores financeiros de 2007 até 2016. Importante notar que foram utilizados dados de 2015 na inviabilidade de não conseguir obter dados de 2016 em certos casos. Nossa principal conclusão é que os fundos da UE produziram resultados positivos. No entanto, os resultados foram menores quando comparados aos índices financeiros do mercado remanescente no norte de Portugal. Considerando os resultados obtidos, somos levados a concluir que o processo de convergência entre regiões não está sendo verificado.

Key words: Community Funds; European Union; North Region.

JEL-Codes: B17; C10; F42; F43; F62; J11; J21; R11.

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Acronyms

EU – European Union

NSRF – National Strategic Reference Framework

ON 2 – O Novo Norte 2

CCDRN – Comissão de Coordenação e Desenvolvimento da Região Norte

EEC – European Economic Community

EFTA – European Free Trade Agreement

GDP – Gross Domestic Product

VAT – Value Added Tax

GNI – Gross National Income

ERDF – European Regional Development Fund

CF - Cohesion Fund

ESF – European Social Fund

EAFRD – European Agriculture Fund for Rural Development

EMFF – European Maritime and Fisheries Fund

CSF I (Community Support Framework I)

CSF II - Community Support Framework II

CSF III – Community Support Framework III

POFC – Programa Operacional de Factores de Competitividade

PT2020 –Portugal 2020

ROI – Return on Investments

ROA – Return on Assets

ROE- Return on Equity

1. Introduction

Nowadays, the disparity of earnings between individuals is notorious and due the globalization not all the individuals have the same trumps according the area which they inhabit.

As a topic for the development of my dissertation plan I chose " The Effect of European Union Funds on Firms: The Case of Northern Portugal (2007-2013)". Such motivation for choosing this subject arose, with special emphasis, due the crisis that affected the north's industry, causing many insolvencies and decreases in terms of productivity, employment and exporting. Midelfart-Knarvik and Overman (2002; 322–59) found that found that incentives as the European Structural funds have not permitted undeveloped regions to reach the EU average, once it boosts R&D intensive industries to locate in countries and regions that have lower appropriations in skilled labor. Also, the possible abolition of funds to Portugal and Spain and the reason for such a decision by the European Commission contributed to the selection of my dissertation's theme, as well as the implementation of the new partnership agreement Portugal 2020 (2014 - 2020) seeking to give continuity to the extinct NSRF - National Strategic Reference Framework (2007 - 2013) which had as its main objective to fight essentially weaknesses at social, economic and competitive level in the country.

The operating regional program in place until 2013 for the North was termed as "ON.2 – O Novo Norte", but now through the new partnership agreement is in force the "Norte 2020". The northern region was preferred to any other as well as being the region that more funds receive, there is a higher availability and access to data, the following figure verifies that.

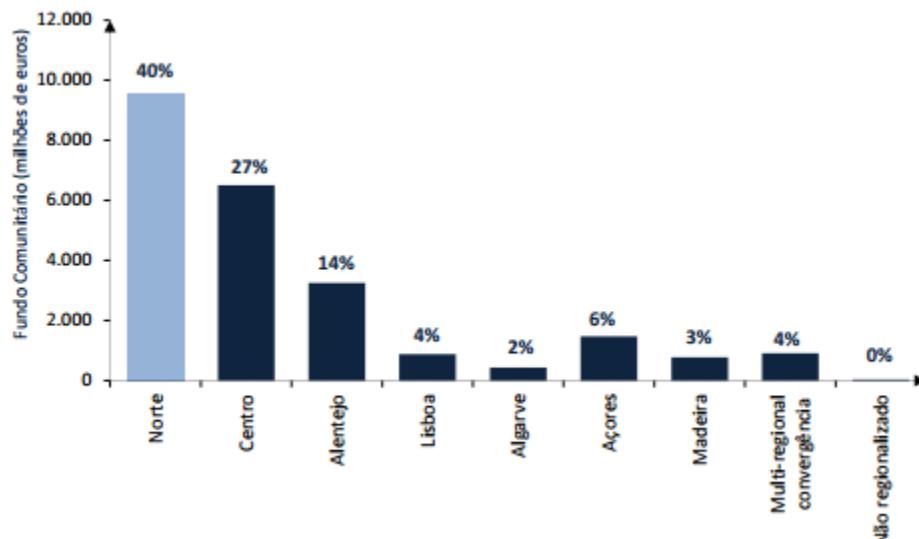


Figure 1 - Distribution of the community funds executed by Region (Source: ON2 – Relatório de execução 2014)

The pertinence of this study is based in the following question: In what extent the community funds would be a part of the leverage to the regrowth of firms located on Portugal's north region? With this I intend thus to create an approach, in order to clarify all readers, about what is European Union, its principals, how the budget is financed, from where the funds come, the policies now in force, to which areas the funds are distributed, and a deep literature review will be written about the development of community funds programs until these days as well as brief description of the Portugal's North Region and of the ON.2 program. Thus, basing my research on information relative to the ON.2 program (2007 – 2013), an analysis will be performed to the variation of 760 firms' economic and financial indicators of the north region, 380 that obtain the funds and the remaining 380 are competitors, ex-ante and ex-post obtaining these same funds with a period of analysis between 2007 and 2016, in order to verify if the funding is being well implemented, if it is accomplishing the goals of the north operational regional program and, subsequently a comparison between such indicators will lead to the recognition of the main reasons for the failure or success of the many observed companies.

To achieve all of what was mentioned above, the extraction and collection of all information has been processed mainly through Sabi data base and through CCDRN (Comissão de Coordenação e Desenvolvimento da Região Norte), computing then the medium values, mean values, standard deviation values, as well as the maximum and minimum of the sample.

So, this dissertation is composed by eight chapters, starting with an introduction, followed by a brief description of the European Union. As third chapter we approached all support programs in Portugal until today, inclusive the North Region and its respective Operational Program between 2007 and 2013. In the fourth chapter we may read about growth and regional asymmetries models. More forward, as fifth chapter, the methodology and the sample worked in this dissertation are presented. Arriving to our practical case, we have the empirical results where the reader may find a financial ratio analysis, namely liquidity ratios, profitability ratios, debt ratios, operational ratios of the 760 firms and a comparison between the 380 that obtained the funds and the other 380 competitors. Already passed the sixth chapter, follows the conclusion as the seventh chapter, ending then with annexes and references.

2. A Brief Description of the European Union

2.1. European Union

The European Union is an economic and political union physically headquartered in Brussels, that primes essentially for human equality and rights, and a sustainable growth in all union by generating an internal market with an unique currency imposed on 1999 and with the allowance of free mobility of goods, services and people. It is constituted by 28 countries¹, soon by 27 countries with the exit of the United Kingdom, and by 14 institutions² that discuss and define the priorities, the execution and legislation of the rules, the justice of determined decisions and activities made by the union, among others, through the assignment of partnership agreements denominated as treaties³. The European Union turned official with the signed of the Maastricht Treaty on 1993.

This fusion of interests comes from the European Coal and Steel community (1951) created through the Paris Treaty and the European Economic Community (1958) created through the Rome Treaty, which both tried to give a strong opposite movement to the misery caused in the previous Second World War occurred from 1939 until 1945, promoting this way peace and a slogan *“Make war unthinkable and materially impossible”*⁴.

The joint of Portugal to this community on 1986 (EEC in that date) meant the abandonment of the European Free Trade Agreement (EFTA) and it was influenced by the strong economic relation with England, which left firstly the EFTA⁵ to head to EEC.

¹ European Union, “Os países da União Europeia”, https://europa.eu/european-union/about-eu/countries/member-countries_pt, accessed on 21Dezember 2016.

² European Union, “Instituições e outros organismos da UE”, https://europa.eu/european-union/about-eu/institutions-bodies_pt, accessed on 21Dezember 2016.

³ European Union, “Treaties”, https://europa.eu/european-union/eu-law/decision-making/treaties_pt, accessed on 21Dezember 2016.

⁴ Schuman (1950), “Schuman declaration and the birth of Europe”, <http://www.schuman.info/9May1950.htm>, accessed on 2 November 2016.

⁵ Vilaça, J., “EFTA”, http://www.fd.unl.pt/docentes_docs/ma/jlcv_ma_12812.pdf, accessed on 21Dezember 2016

2.2. EU Principals

The EU acts through the following principals:

1. **Principle of unity and budget** - all income and all expenses must be incorporated in a single document.
2. **Principle of annuality** - The budget is exercised for one year at a time.
3. **Principle of balance** - Forecasts of balance of income should be equal to payment appropriations for that same exercise.
4. **Principle of unit of account** - has to be all in euros.
5. **Principle of universality** - total revenue covers the commitments set - Community budget cannot be in deficit.
6. **Principle of budgetary specification** - Any appropriation must have a given purpose and be affected to a specific purpose.
7. **Principle of transparency** - ensure good information about execution and accounting of the budget.

2.3. EU Budget

It can be considered as a reserve deposited (145 000 millions €) by all the European Union countries in order to affect in a better way the resources in function of the public objectives, establishing in this way the economies and helping to redistribute the richness according to the needs of each country that belongs to the Union. Most of the budget is spent on the sustainable growth of the natural resources and on employment area. Unfortunately, the EU budget has not the function to establish the economies due to its low budget and destination of funds as well as it does not allow having a redistributive function. This can be played by regional policy or social policy, however this corresponds to 32% of the budget, which does not go beyond 0.3% of GDP, too small value compared to the huge inequalities between spaces and people. It is up to countries to finance the fight against these situations

through the progressivity of taxes and social security systems. 76% of the EU budget manage is shared with national and regional entities.

2.4. EU Financing

The financing of EU is assured through their own resources: agriculture rights and quotizations without sugar; other costumes rights; transfers of the % of earnings of VAT charged to each member state and annually maximum transfers of 0,73% of GNI of each member state.

2.5. Community Politics

Community funds are obligations, mainly on monetary terms, that have the finality to invest in order to benefit a society/community/region in cause, for instance, the community funds are held by the European Union through obligations performed by all member states so the investment is distributed to this area pointing to a more balanced Europe at all levels.

So, the EU budget must integrate on itself a fund department to turn an Europe more balanced by investing in convergence areas, diminishing the development differences and disparities of wealth. EU by collecting money through the years was able to provide a financial source that was needed to achieve and rebuild its strategy constantly, the European Structural and Investment Funds:

- ERDF – European Regional Development Fund ⁶
- CF - Cohesion Fund ⁷
- ESF – European Social Fund ⁸
- EAFRD – European Agriculture Fund for Rural Development ⁹

⁶ European Comission, “Fundo Europeu de Desenvolvimento Regional”, http://ec.europa.eu/regional_policy/pt/funding/erdf/, accessed on 21Dezember 2016.

⁷ European Comission, “Fundo de Coesão”, http://ec.europa.eu/regional_policy/pt/funding/cohesion-fund/, accessed on 21Dezember 2016.

⁸ European Comission, “Fundo Social Europeu”, http://ec.europa.eu/regional_policy/pt/funding/social-fund/, accessed on 21Dezember 2016.

- EMFF – European Maritime and Fisheries Fund ¹⁰

These financial resources mentioned above are available in order to be applied at diverse development politics that the EU covers:

- Regional and Cohesion Policy (The only that is relevant for this study)
- Agriculture Common Policy
- Commercial and Competition Policy
- Commercial and External Economic Relations
- Fishing Common Policy

2.6. Regional and Cohesion Policy

The economic and social cohesion seek to eliminate gradually the inequalities between regions. For that reason, the structural funds were reinforced to develop the poorest regions, the agriculture and the professional formation, namely the ERDF, ESF and CF. The funds targeted at achieving greater economic and social cohesion and reducing disparities within the European Union (EU) have more than doubled in relative terms since the end of the 1980s, making development policies the second most important policy area in the EU.¹¹

There are objectives that are directly related with the level of social development, economic, technological, among others. To harmonize all countries around the optimum development level, the EU dispenses 145 000 million of euros for accomplish its objectives. By reworking the cohesion at the economic, social and territory levels, the main objectives of this initiative are to recover:

⁹ European Comission, “Desenvolvimento Rural 2014-2020”, http://ec.europa.eu/agriculture/rural-development-2014-2020/index_pt.htm, accessed on 21Dezember 2016.

¹⁰ European Comission, “Política Comum das Pescas”, https://ec.europa.eu/fisheries/cfp_pt, accessed on 21Dezember 2016.

- Undeveloped regions, which budget per capita are less than 75% of the community medium.
- Industrial areas on crisis, which budget per capita are higher than 75%.
- Border areas, promoting cooperation and change of knowledge between countries.
- Agriculture and Fishing.
- Employment and promote formation.

According to Rodríguez-Pose and Fratesi (2004) the convergence zones are mainly in the southern Europe and the new countries that joined in 2004 (regions that have a GDP below 75% of the Community average). To these regions the Cohesion Fund has reinforced the structural funds in order to help them to converge to the level of development of the remaining member states. It was created to help Portugal, Spain, Ireland and Greece, which consume around 80% of the community budget. However, the richest countries despite being the main contributors to the budget, they are also the largest beneficiaries and so Europe continues to grow at two different speeds.

3. Support Programs in Portugal

3.1. Previous Regulation

The Previous Regulation may be characterized as the first community fund that arrived to Portugal ever, between 1986 and 1988. Still living with the Escudos as the mother currency, there were transferred 237 millions of Escudos (only 177,7 million were applied) to the country from ERDF, ESF and EAFRD.

The community funds, mainly ERDF, had contributed essentially to finance 2.262 investment projects and 650 projects integrated in 3 thematic programs in the areas of productivity, telecommunications and energy, and one operational program that aimed to develop the North of Alentejo.

In 1988, after the success descendant of the two previous years, 360 millions of escudos had been transferred to Portugal with the finality to improve the Portuguese industry. This amount of cash arose from the structural fund ERDF, concerned primarily with infra-structures, and from the ESF with the priority of improve the training and employment at all levels.

3.2. CSF I (Community Support Framework I)

The Community Support Framework I, applied from 1989 till 1994, brought a finance of 3.441 million of escudos (17.16 million of euros) to Portugal, of which 1.708 million (8.52 million of euros) were from the structural funds, and the remaining 1.733 million (8.64 million of euros) were supported by the public.

The distribution of the funds was mainly absorbed on the improvement of productive activity and on the human resources, and by the contrary the public finance was destined to the infra-structures. Overall, this represents 15% of the total investment in Portugal.

Supporting well this innovative initiative, Rodriguez-Pose and Fratesi (2004; 97 -113) affirm that there is positive growth effects while investing in education and human capital, as well as on agriculture. However, they suggest that when approaching infrastructures or to business support investments there are no noteworthy benefits from here.

The main projects in the north region involved a highway that connects cities like Famalicão, Vermoim, Vale do Ave and Cruz, and Braga. The decontamination of the Vale do Ave and the construction of a hospital in Matosinhos were remarkable projects in this era.

Important to highlight that the cession of structural funds boosted the Portugal's convergence by reducing in 8% internal disparities and by boosting in 10,5% (0,7% annually) in the GDP per capita comparing to the community mean. Also, this program contributed positively to the employment in country, creating approximately 80 thousand jobs.

The CSF accomplished one of its main purposes, the convergence between Portugal and the European Union in all the three principal pillars, financial, economic and social cohesion, by mechanisms that benefited the regional fairness in detriment of the biggest concentrations, namely the Grande Porto. By the contrary, the goals determined to the tissue industry were not fully achieved, leaving these goals to the following community program, the CSF II.

3.3. CSF II (Community Support Framework II)

Succeeding the CSF I arose CSF II on 1994, with a duration period of 6 years with the proposal of convergence to EU and reducing internal asymmetries by implementing innovative programs by sectors and regions.

To do so, 17 operational programs were realized focusing in four priorities that were established:

- **Qualify the human resources and the employment**

Total investment cost: 862,1 m. escudos

- **Reinforce competitiveness factors of the economy, namely the textile industry where tissue is inserted.**

Total investment cost: 2 913,6 m. escudos

- **Promote life quality and social cohesion**

Total investment cost: 388,1 m. escudos

- **Focus in the regional economic base through the development of regional operational programs**

Total investment cost: 1073,9 m. escudos

Overall, there was a significant evolution in the country once the implementation of the regional operational programs was a success, creating around 77 thousands jobs descendent of the structural funds application and growing 7,7% gross fixed capital formation between 1994 and 2000.

3.4. CSF III (Community Support Framework III)

The expansion and globalization were imminent while arriving to the new century, affecting the global economy as well its structure. For this reason and other economic, financial and convergence parameters achieved, the CSF III gives continuity in the next six years (2000-2006) to the previous and extinct CSF II in order to adapt the older strategies to the new reality establishing new objectives, with the special particularity of the

introduction of Regional Development Plan, other thematic programs, and an ex-ante , intercalary and ex-post evaluation of the program with the possible intervention according the needs and/or the evolution level of the project/country.

The urban requalification, where the Regional Development Plan is inserted, is one of the priority axis of the CSF III, promoting a sustainable and balanced growth in the diverse regions where opportunities unexplored should arise and the issues related with nature and biodiversity must be conserved.

The second priority axis pass by a massive investment in transports and communication proportionating a more efficiency of internal mobility and by giving a new geo-economic view to Portugal by affirming it as the Atlantic frontier of Europe with the intuit to connect the Europe with the rest of the world. However, Vickerman et al. (1996; 225-234) stated that investing in transportation infrastructures may not counter interregional discrepancies, once these expansions will always add more value to the big regions than to the suburbs.

The third axis is related with the development of an informed and social community that may benefit of it to stimulate the innovation and the competitiveness as well as to the knowledge gain of the human capital by reviewing the actual business model in force, which will also proportionate a huge support to the traditional and agriculture industries.

Finally, solidarity and cohesion are focused so the qualification level, the insertion in the society and the employment rate increase in the future.

As an encouragement to the success of the appliance of the funds, the European Union generated an efficiency reserve of 4% of the total previewed dotation for each Member-State to be distributed according to the more efficient Operational Programs.¹²

On 2006, the development process of the regional operational programs still at its peak, however some disabilities were verified. Some finance from the funds were not being

¹² IFDR, “A Avaliação do QCA III”, <http://www.ifdr.pt/content.aspx?menuid=111>, accessed on 19Dezember 2016.

perfectly employed, leading to a slower growth of the qualification employment offer in relation to the goals planned due to the indirectly missing of active and constant activities in terms of entrepreneurship in Portugal. In consequence of what was related, the country was not able to adapt in the fastest way to this new reality.

The Porto Digital was one of the biggest projects achieved in the North Region in this date, where the description of the project may be found on the references of this page.¹³

3.5. NSRF (National Strategic Reference Framework)

The NSRF, National Strategic Reference Framework, is a program elaborated by the Member-States and approved by the European Commission, entering in force between 2007 and 2013. The program aims essentially to potentiate even more the human qualifications, the education and the competitiveness, as well as the conditions to valorize the genres equality, the territory by attracting better conditions to the productivity investment accompanied with the investment of the due equipment, and to improve the life condition of the population. De la Fuente and Vives (1995; 11-54) presented us a Spain case counting with 17 regions of the country between the years of 1980 and 1991, where the decrease of differences was promoted by spending more and more in the education sector.

Until 2015, 13841 firms were supported by this incentive mechanism and by financial engineering including startups, with an overall investment rounding the 11 thousand million euros, benefiting more from this the POFC (Competitive Factors Operational Program) followed by the operational program in the North Region. The graph below shows us that:

¹³ IFDR, “Porto Digital: on the way to knowledge based society”, http://www.ifdr.pt/ResourcesUser/AplicacaoFundos/Documentos/pt_norte_portodigit.pdf, accessed on 19Dezember 2016.

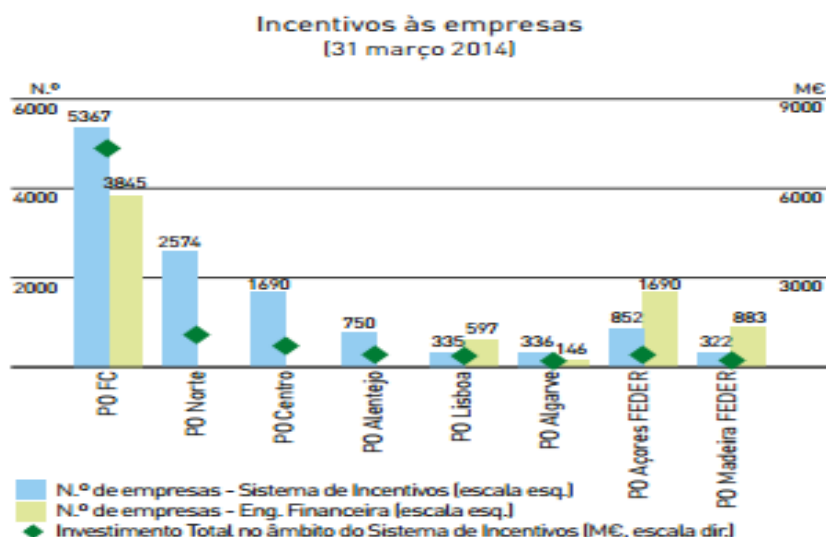


Figure 2 - Firms Incentives (31 March, 2015). Source: Boletim Informativo 23 - QREN

The North operational program occupies the second position with 2959 supported companies and with an approximated 2500 Million euros invested.

3.5.1. North Region

Considered as the mother region of Portugal and privileging of an attractive natural landscapes from its ancestors with many natural resources as well as its gastronomy and exporting ability in sectors like textile, shoes and clothing, the region welcomes 3,6 million of citizens dispersed essentially in the coastal zone, counting with advanced educational, technological, communication, transportation infrastructures and with young people with knowledge oriented to the future. The region benefits from its old wineries in Douro that originated the well known “Vinho do Porto” among other green wines produced in Minho-Lima and Cavado. Although of this perspective, the region suffers of an enormous territorial disparity with developed cities, for instance Oporto, and with rural villages like Trás dos Montes.

The north region represents 35% of the population of the country, 39% of national total exporting and 29% of the GDP of national economy. It owns 86 municipals and 1426 parishes, 5 districts and small portions of some divided in sub regions that occupy 21278 Km2 as it is shown below in the map:

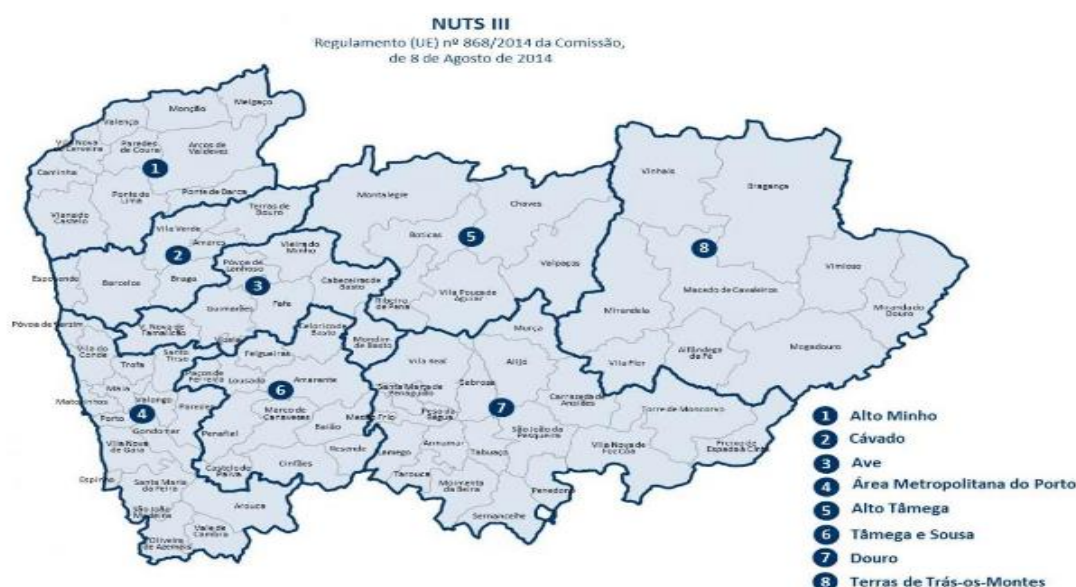


Figure 3 - Sub-regions of the North Region (NUTS III) (Source: CCDRN - <http://www.ccdrn.pt/regiao-norte/apresentacao>)

3.5.2 North Operational Program (ON.2 – O Novo Norte)

A new perspective arose in the CSF III through the development of operational programs distributed along the country. Inserted in the NRSF program from 2007 until 2013, the ON.2, the continuation of the ON from the CSF III, had the intent to collaborate in the progress of the north region, collecting 2.7 thousands millions euros, the highest financial amount in the country, from the only fund that financed it, ERDF, and still aiming to an

investment rounding the 4.25 thousand millions euros in the region. Such investment had instilled the same growth values as the previous programs, the development at social, economic and territorial areas in the region, by defining priority axes in¹⁴:

1. Competitiveness, Innovation and Knowledge;
2. Economic valorization of specific resources
3. Environment and territorial valorization and qualification;
4. Urban system qualification;
5. Governance and Institutional Capacity Building.

The first priority axis offers incentive and financing systems especially to the investment in small and medium size firms. With this, affecting positively and indirectly all other axis, a reinforcement on the technology may increase the productivities and competitiveness through the innovation in the region as well as the promotion of the specialization in the country that may lead firms to develop not only in the domestic area but also abroad¹⁵.

3.6. Portugal 2020

Fitting the principals established in the implementation of the European Strategy 2020, Portugal had the incentive to keep the continuously effort to the growth of the country as well as the effort to succeed territorial challenges, being the partnership with the European Commission prolonged until 2020 and still financially supported by the ESIF.

¹⁴ QREN, “Priority axis structure”, http://www.novonorte.qren.pt/fotos/editor2/Documentacao/acoess_on2_out2011.pdf, accessed on 4 January 2016.

¹⁵ The structure of all axis is available on: http://www.novonorte.qren.pt/fotos/editor2/Documentacao/on2_tipologias.pdf

Counting with the a total of sixteen operational programs, the 25,8 billions of euros transferred to the national territory aimed the growth of exportation with direct support to the firms and the stimulation of job creation.¹⁶ The distribution of the amount of funds transferred may be consulted below:

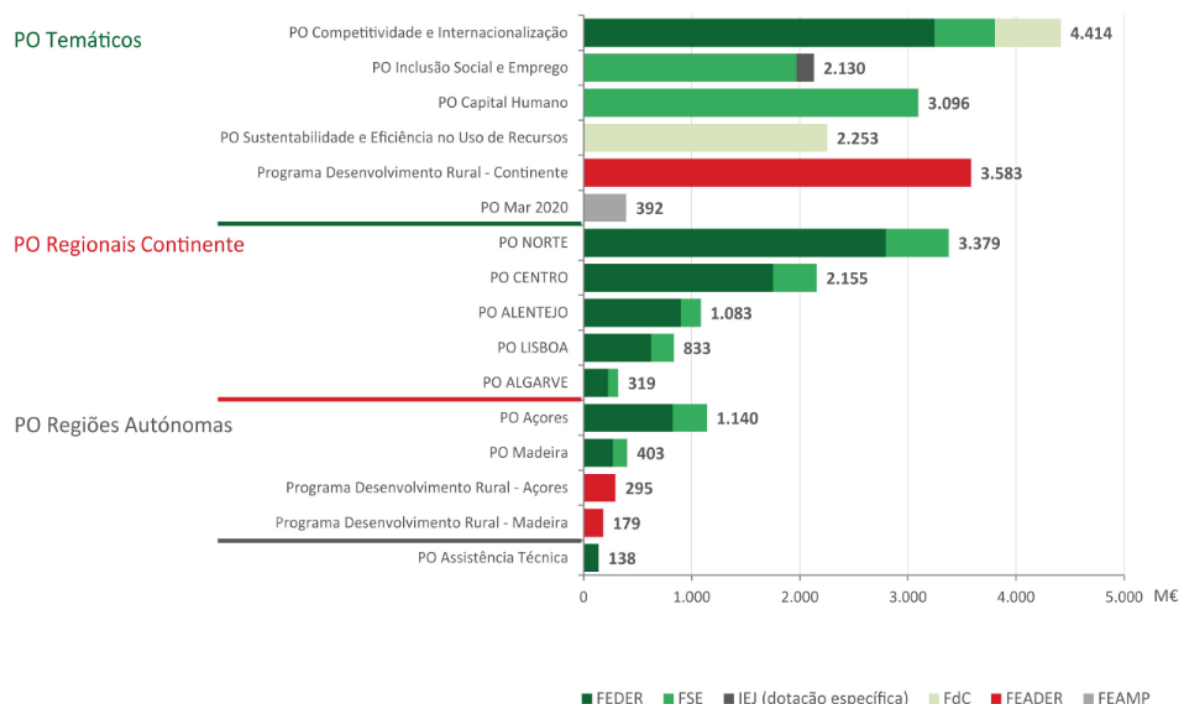


Figure 4 - Distribution of the funds by operational programs (PT2020) (Source: Boletim Informativo dos Fundos da União Europeia, 30 Set 2016)

Three main distributions have been made through the operational programs, a thematic, a regional in the continent and other in the autonomies regions. Regarding the thematic operational programs, the structural funds focused more (4.414 M€) on the competition and internationalization operational program. Then, in regional terms the north of the country was the one more aided with a value reaching 3.379 M€, and Azores, as an autonomy region, collected 1.140 M€.

¹⁶ Eurocid, Portugal2020, http://www.eurocid.pt/pls/wsd/wsdwcot0.detalhe?p_cot_id=8038 accessed on 12 May 2017

4. Theories of Growth

Solow (1956) presented us on a theory of growth, a theory served as basis for other theories due the lack of growth previewed by the model. This model revealed that its growth source was supported essentially on technological changes, human qualification and the accumulation of capital, relying on the assumption that technology is a public good, available to anyone free of charge. This perspective puts the emphasis on capital accumulation as the main vehicle for reducing differences in productivity across countries or regions. Moreover, this is assumed to happen more or less automatically, as long as markets are allowed to work freely. By the other side, this perspective is based on a totally different view of technology, emphasizing its public as well as private character, and the complementarities with other factors affecting the growth process. This leads to the hypothesis that, without the ability to develop such complementary factors, countries or regions are likely to fall behind rather than catch up.

Krugman (1991) supporting also a divergence case on the long-run, defends that different specializations lead to asymmetries on the growth rate. The more advantaged areas will benefit of their advanced technology to grow, due a more qualified human capital, increase incomes and transport costs, causing a divergence between regions.

Other references may also explain and understand the two views, convergence or divergence, such as the Commercial Theory: *“Economic geography and public policy”*, Baldwin (2003), which assumes two models, the CC model and the CP model, where the first assumes no capital accumulation and in the second assumes the opposite. The CC model revealed to be systematic stable leading to a process of convergence between regions. By the contrary, the CP model assumed an agglomerated economy more identical to our reality, where all individuals desire to locate their business near the big markets, producing goods and services at an accessible price for consumers, generating a decrease on trade costs until they are almost null, leading into an increase of trades and moving the businesses according to the location of the big markets. Important to note, following the

same line of thought, that where the production is fortified, the capital accumulation follows the same trend in that same region. With this, the divergence among regions is a present scenario well evident.

Nevertheless, the divergence occurrence derives from the wealth created along the years in a nation, through the industry capacity of working, developing, innovating and managing innumerable factors. There are nations with more conditions (cultural, mentality, support, ...) to outperform the rest of the world, arising from here competitive advantages. These competitive advantages started to appear and lead to the movement of the capital and labour from a nation to another, creating a cycle of rivalry among competitors known as the 5 Forces of Porter (1989) dependent on new threats, power suppliers and consumers, and the entrance of substitute products or services. The centralization of the capital and labour force implies a process of divergence between regions similar to the agglomerated economy as it was explained above.

The Theory of the Customs Union is a theory that support a convergence in terms of EU territories on the long-run, by expecting a tendency for the convergence of the factors costs and earnings, due the mobility of capital and labour that would lead into a better efficiency and specialization of goods and services. Also, a remove of national monopolies and the upgrade of the competition conditions lead the organizations to adopt more efficient practices to survive. This theory is also known as “Automatic Convergence”, elaborated by Barro and Martin (1991).

5. Sample and Methodology

Firstly, the acquaint of all programs that passed by Portugal is fundamental in order to understand the necessity to this type of intervention in the county. A more general study is performed to the diverse programs implemented since 1989 until nowadays (Previous Regulation, CSF I, CSF II, CSF III, NSRF, PT2020) passing then to a more detailed region, the North region and its respective operational program from 2007 till 2013 (ON.2 - O Novo Norte 2). Also, some theories deserved a brief reference once we are talking essentially about regional asymmetries and the desire inversion of such occurrence, the growth, development and sustainability heading to the convergence and equality at all areas (financial, economic, social, competitiveness, ...).

Following this line of thought, and recurring to Sabi data base, all firms (with exception of a small number of firms due the lack of information) that benefited from the funds between 2007 and 2008 were selected, giving a sample of 380 firms. Startups and bankrupt companies were included in the sample. As a comparison measure, other 380 competitors were also extracted from Sabi data base randomly. Their respective financial indicators were extracted too, namely liquidity ratio, current liquidity, quick ratio, the indebtedness, solvency, leverage, profitability ratios such as ROI, ROA and the profit margin to evaluate them before and after the intervention of the funds. This evaluation was performed by computing the variations from the year 2007 to 2016 and by calculating the median of such variations. Values not available were considered as zero and 2015 values were considered when 2016 values were not available. The distribution of the companies may be consulted in the graph below:

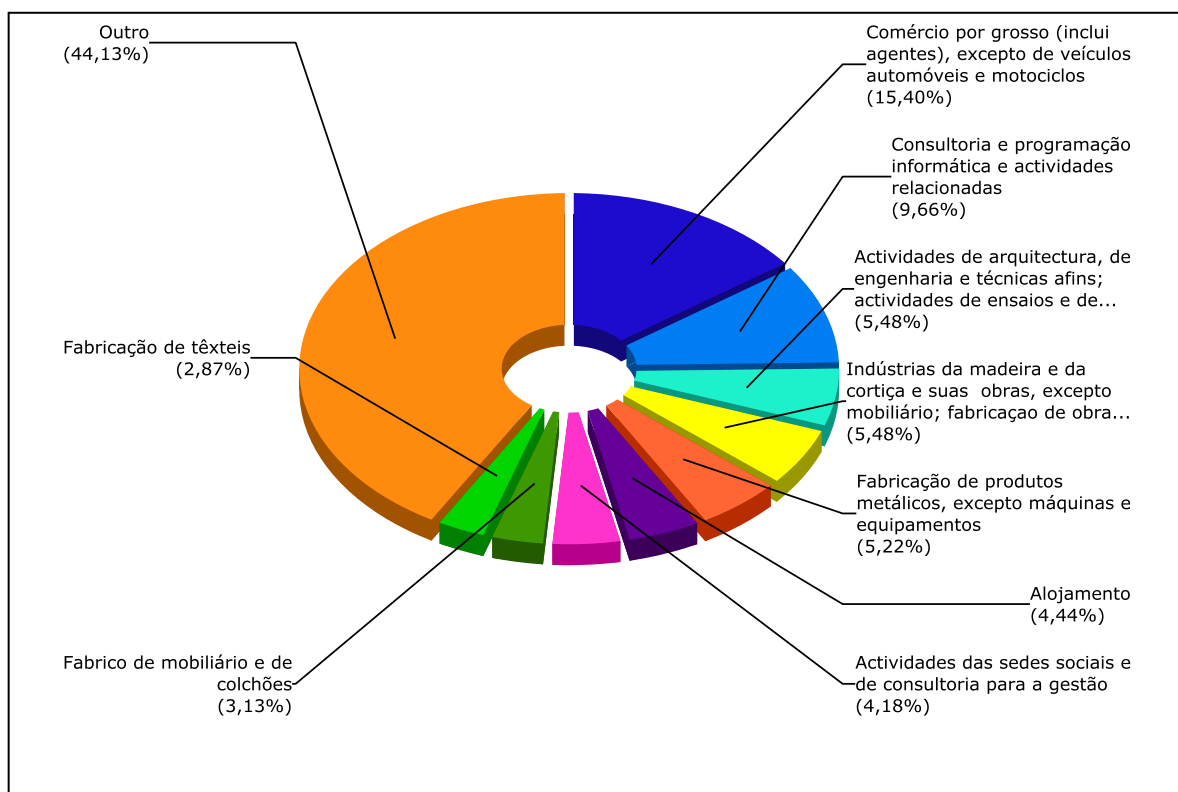


Figure 5 - Companies' distribution among industries (Source: Sabi data base)

Important to note that some proxies have been recurred, in order to compute some ratios (operational margin and gross margin), such as: business volume as proxy of the net sales; operational earnings as proxy of revenues.

The ROE has not been included in this study once high debt firms tend to hide high interest rates and executive payments to investors and shareholders, suggesting then to present metrics like ROE to promote this undesired situation as Duru (2012; 1286-1305) described. With this, the intensity caused by the community funds in the north region may be described, classifying it on the end as positive, negative or indifferent.

6. Empirical Results

With a sample of N=760 firms, 380 took from the vast priority axis of the program and the other 380 as their competitors that didn't benefit from the funds, their financial indicators will be represented as the collection of the medium of the variations from 2007 until now, 2016. Startups and bankrupt companies are included in the sample.

The sample may be provided to who request it.

6.1. Financial Ratios

To a better dismiss to reality, the calculations of the ratios were made by computing the medium values and not the mean values once the medium values remove the outliers from the sample. However, the mean, the standard deviation, the maximum and the minimum values are displayed for the interest of the reader.

6.1.1. Liquidity Ratios

6.1.1.1. Current Liquidity Ratio

Being a short term ratio that divides the total assets by the current liabilities of a firm, it is desired to obtain values higher than 1, meaning that the company is less vulnerable to their responsibilities detaining a higher volume of assets than liabilities in the moment. Also, there is a positive relation between the current liquidity ratio and the solvency ratio.

Current Liquidity Ratio	Medium	Mean	Std. Deviation	Maximum	Minimum
Firms supported by the funds	0.74%	1.84%	15.63%	268.56%	-70.34%
Competitors	2.87%	1.42%	12.60%	183.14%	0.00%

Table 1 - Current Liquidity Ratio

The results obtained show us that the companies that obtained the funds are more vulnerable than those that didn't obtain, or in other words, their current composition have less assets' abundance than the companies free of found, getting a medium of 0.74% against 2,87%.

6.1.1.2. Quick ratio

Similar to the current liquidity ratio, the quick ratio evidence the usage of the more liquid assets in the company to meet their obligations on the short run by detaching the inventories from the current assets and still dividing it for the current liabilities. Inventories may be considered as more illiquid comparing to other cash sources, consuming more time and losing money during the converting process.

Quick Ratio	Medium	Mean	Std. Deviation	Maximum	Minimum
Firms supported by the funds	0.55%	1.66%	15.45%	268.56%	-70.34%
Competitors	1.14%	2.44%	12.60%	183.14%	0.00%

Table 2 - Quick Ratio

A ratio as 0.55%, corresponding to fund benefited companies, demonstrate that for each 1€ of current liabilities the company detains 0.55€ of liquid assets to insurance. The same line of thought is implemented to 1.14% ratio from the non-fund benefited companies.

6.1.1.3. Solvency Ratio

As part of our financial analysis, the capability of company to cover all their debt including other obligations in the long term, for instance taxes or investors' debt, may be denominated as solvency ratio. A must ratio not only for investors who look for stability on the long run in terms of debt payments, but also to managers regarding the company's current financial health allowing anticipating and preventing any type of default or bankruptcy.

Solvency Ratio	Medium	Mean	Std. Deviation	Maximum	Minimum
Firms supported by the funds	12.96%	0.93%	104.27%	133.21%	-1341.10%
Competitors	35.26%	36.71%	31.00%	100.00%	-254.33%

Table 3 - Solvency Ratio

On medium, the 760 firms presents positive results on this area, where the net income after taxes deduction and all depreciations covers in 12.96% all liabilities in force for companies that allotted funds and 35.26% for the remaining.

6.1.2. Profitability Ratios

6.1.2.1. ROI (Return on Investment)

As the own designation indicates, the return on investment refers to the profitability generation of a determined investment by computing the difference between the gains and the costs allowing to conclude the efficiency of these last.

Return on Investment	Medium	Mean	Std. Deviation	Maximum	Minimum
Firms supported by the funds	-0.92%	-29.14%	415.59%	820.11%	-7179.07%
Competitors	12.39%	25.18%	269.31%	153.89%	-1453.25%

Table 4 - Return on Investment

The fail between the 380 firms that were reinforced with funds is evident on this field, achieving medium values of -0.92% against 12.39% for those that were not reinforced.

6.1.2.2. ROA (Return on Assets)

Assets owned by a company may also generate gains or costs according how their management is proceeded. The return on assets gives us an idea if the corporation is monetizing their assets efficiently according their dimension, by simply dividing the net income by the total assets owned.

Return on Assets	Medium	Mean	Std. Deviation	Maximum	Minimum
Firms supported by the funds	0.02%	-23.09%	354.40%	126.05%	-6808.29%
Competitors	4.24%	14.72%	117.00%	120.63%	-85.70%

Table 5 - Return on Assets

In general a value obtained around 0,5% may be considered as the optimal value, value which may vary between industries. In our sample, the firms braced with funds are close to this optimal value, operating on the 0.02% being surpassed by the others that obtained 4.24%.

6.1.2.3. Profit Margin

A measure many times misunderstood with profit percentage, the profit margin is a major ratio among investors by combining the division of the deduction between revenues and expenditures occurred in a company, as known as net income, with the revenues.

Profit Margin	Medium	Mean	Std. Deviation	Maximum	Minimum
Firms supported by the funds	0.77%	-12.17%	96.02%	299.86%	-1164.68%
Competitors	3.45%	1.88%	79.32%	152.36%	-1494.09%

Table 6 - Profit Margin

Overtaking negative values are for sure the main goal on a ratio like this one, something that was verified in the two categories of companies analyzed, the ones that insured funds and the ones that did not. 0.77% and 3.45% were the values disclosed on this ratio, respectively. Such values means that the company has a net income of 0,77€ for each euro of net sales achieved.

6.1.3. Debt Ratios

6.1.3.1. Indebtedness

Raised by the debt issue, the indebtedness represents all obligations that the issuers, in this case the companies, have to pay in the future to the lender according to the respective contract. Such phenomena happens in order to the companies obtain cash in advance to finance future objectives, for instance future projects. Dependence in debt is represented as a higher value in indebtedness, which must be avoid at all cost by the companies.

Indebtedness	Medium	Mean	Std. Deviation	Maximum	Minimum
Firms supported by the funds	1.10%	28.54%	115.84%	1441.10%	-133.22%
Competitors	64.74%	63.29%	31.00%	112.01%	0.00%

Table 7 - Indebtedness

Companies supported from the funds revealed 1.10% of indebtedness, a value much weaker when compared to the 64.74% indebtedness performed by those that have not been aid by the funds.

6.1.3.2. Interest Coverage Ratio

With the finality to understand the company's capability to insure interest payments of debt contracted, the interest coverage ratio computes a safeness margin, highlighted by the shareholders and providing a better insight in terms of the next investment decision, by dividing the earnings before interests and taxes (EBIT) by the interest expenses.

Interest Coverage Ratio	Medium	Mean	Std. Deviation	Maximum	Minimum
Firms supported by the funds	1.16%	-170.93%	106029.76%	1270250.74%%	-1567952.55%
Competitors	5.08%	423110.90%	6493837.95%	19831421.67%	-50027.96%

Table 8 - Interest Coverage Ratio

Percentages above 1,5% set the company in a well seen scenario among lenders once they are profiting enough to cover interest expenses. Otherwise, the company's position may be debatable due its default risk increase, an occurrence that was not observed on our sample, with values comprehending between 1.16% and 5.08%.

6.1.3.3. Leverage Ratio – Debt to Equity

A “cash-advance” source englobing financial instruments by contracting debt and keeping the equity of a company at the same level, with the finality to finance operations and to boost shareholders' wealth, where the total gains and losses are more probable to achieve extreme values leading to riskier activities in this branch.

Leverage Ratio – Debt to Equity	Medium	Mean	Std. Deviation	Maximum	Minimum
Firms supported by the funds	31.45%	34.08%	1389.01%	12306.50%	-18352.74%
Competitors	32.17%	34.59%	12436.34%	14863.60%	-7606.13%

Table 9 - Leverage Ratio - Debt to Equity

Measuring the composition of the total capital of a company, a leverage ratio, in this case the debt-to-equity ratio, above 50% may mean that the financial structure of a company is

composed with higher volumes of debt than their own equity. On our observation, results as 31.45% and 32.17% for the ones that obtained the funds and for those that did not obtained, respectively, are a total viable scenario for a company, with controlled levels of debt that may be helpful to the company's growth if the rate of return covers all other expenses derivated from the loans. Yet, the optimal value for this ratio is circa 2%.

6.1.4. Operational Ratios

6.1.4.1. Operational margin

What remains after the payment of all diverse expenses, fixed and variable, associated to the production section and the sale of the product may be considered as profit. So, the computation of the operational margin, also known as operational profit, is calculated through the division of the operational income by the net sales. As previous said, the calculation of the operational margin in this case had the business volume as proxy of the net sales. With this type of information, the company is able to imply an optimal strategy by setting an optimal price for their sales and by gauging the efficiency of their production, leading to possible growths in this margin that may rest shareholders' minds.

Operational margin	Medium	Mean	Std. Deviation	Maximum	Minimum
Firms supported by the funds	33.14%	-250.18%	3503.71%	22624.34%	-42958.64%
Competitors	28.07%	8352.083%	195676.803%	54516.45%	-833204.86%

Table 10 - Operational Margin

The 760 firms revealed to have financial health positively assured, as the values above show us.

6.1.4.2. Gross margin

A simple ratio known by many that imposes the difference between revenues from sales and the cost of goods sold, with a brief deviation by taking operational earnings as proxy of revenues. This margin allows managers to comprehend and adopt the best way to reduce costs in the productive process or in the materials, or in the case of unsucces on the last, lift prices is an option, generating this way margin. The higher the ratio, the higher the company will retain for themselves to reply their costs and other obligations.

Gross margin	Medium	Mean	Std. Deviation	Maximum	Minimum
Firms supported by the funds	33.14%	-250.18%	3.69%	57.49%	-38.38%
Competitors	0.53%	0.56%	0.32%	1.00%	-0.09%

Table 11 - Gross Margin

Firms supported by the funds retained 0.33141€ from each euro of revenue made, a value much more promising in relation to the 0.00530€ of those that were not supported by the funds.

6.1.4.3. Number of employees

The reception of structural funds had the propose to boost projects and companies activities in the best efficient possible way contributing then to the domestic GDP. As consequence, the level of employment should increase as it was forecasted and desired.

Number of employees	Medium	Mean	Std. Deviation	Maximum	Minimum
Firms supported by the funds	100%	403%	949.42%	11800.00%	-89.00%
Competitors	95.45%	2665.51%	9743.27%	144300.00%	-41900.00%

Table 12 - Number of Employees

With the results collected, one of the main goals of the EU was achieved, by verifying an increase in medium 100% in terms of employment outperforming their competitors by 4.65%.

6.2. Financial Ratios - Overall View

Summarizing all and starting by describing the liquidity ratios, 0.74%, 0.55% and 12.96% were the median values of the current liquidity ratio, quick ratio and solvency ratio respectively attained by the firms supported by the funds against the 2.87%, 1.14% and 35.26% median values of their competitors. The profitability ratios follow a distribution of -0.92%, 0.02% and 0.77% median values of the ROI, ROA and Profit Margin respectively conquered by the firms supported by the funds against the 12.39%, 4.24% and 3.45% median values of their competitors. Thirdly, the debt ratios show 1.10%, 1.16% and 31.45% median values of the Indebtedness, Interest Coverage Ratio and Leverage Ratio (Debt-to-Equity) respectively accomplished by the firms supported by the funds against the 64.74%, 5.08% and 32.17% median values of their competitors. To end, the operational ratios with 33.14%, 33.14% and 100% median values of the Operational Margin, Gross Margin and Number of Employees respectively managed by the firms supported by the funds against the 28.07%, 0.53% and 95.45% median values of their competitors. According to the table below, the funds firms reveal values below relatively to their competitors with exception in the operational field, achieving percentages of 33.14% for the operational margin and gross margin, and with a 100% variation in the number of employees. However, these values may not be interpreted as “bad values” once the variations are positive, or in other words, the values represent growth. Important to highlight the only exception, the Return on Investment, which may be explained due the long term investments and may have not been collected fully, with -0.92% to the firms supported by the funds and 12.39% to their competitors.

Liquidity Ratios	Firms supported by the funds (Median Values)	Competitors (Median Values)
- Current Liquidity Ratio	0.74%	2.87%
- Quick Ratio	0.55%	1.14%
- Solvency Ratio	12.96%	35.26%
Profitability Ratios		
- ROI	-0.92%	12.39%
- ROA	0.02%	4.24%
- Profit Margin	0.77%	3.45%
Debt Ratios		
- Indebtedness	1.10%	64.74%
- Interest Coverage Ratio	1.16%	5.08%
- Leverage Ratio (Debt-to-Equity)	31.45%	32.17%
Operational Ratios		
- Operational Margin	33.14%	28.07%
- Gross Margin	33.14%	0.53%
- N° of Employees	100%	95.45%

Table 13 - Financial Ratios (Overall View)

Also, is essential to understand that “start up” companies have been included in the sample as well as bankrupt companies which may cause a disturbance in the sample namely when approaching the term “growth”. The same result had already been proofed by Barro and Sala (1995; 107–82), revealing, through practical estimations, a superior interrelation among European regions, however, as Martin (1998; 757-74) stated, at a slow rate .Such occurrence leads us, according with Esteban (1994; 13-84), to announce that the European integration is not being verified due the divergence between regions in a indoor level, with the richest regions benefiting more than the poorest ones.

7. Conclusion

The expansion of regional asymmetries and diverges in the European Union were a real concern since several years ago until nowadays. However, ideas and initiatives have been rising to contradict this phenomenon in the area, especially when the European Union established a pact between all members states with the finality to convergence the regions, not only on a country-to-country perspective but also on an internal approach.

In Portugal's case, the arose of the starting community supports, the CSF I, then CSF II, followed by the CSF III were a major step to improve and move forward in the future, building a much more complex and helpful system that appeared in 2007, the NSRF, and now in 2014, the Portugal 2020.

With a sample of 760 firms operating in the north region of Portugal, 380 financed by the funds on 2007 and 2008 and other 380 competitors of the north market, huge achievements have been verified in the north region as the numbers of this study evidences, with significant improvements in the firms of the north region in so few years with a tendency to growth more and more. This growth, as it was explained in the firms analysis, still to be lower when comparing to their respective competitors. This may be explained once the funds were also intended to be applied to startup companies that may compromise the growth level of the remaining sample on the first years of activity, as well as the disorder that bankrupt companies may impose. However, as has been cited in my analysis, structural funds do not systematically benefit to the long-run growth of the region where they are implemented, due the different growth speeds levels between developed and emerging regions causing a well known concept, the "Two Speeds Europe" that fits perfectly in the north region of Portugal.

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